

# Organic Colloquium



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## “Chemistry at the Biomedicine Interface: Synthesis and Catalysis”

**Abstract:** Chemical reactivity can be utilized in many ways, including to improve synthetic access to new molecules and to devise tools to advance biomedicine. ‘Synthesis and catalysis’ are two themes interwoven throughout this presentation, which describes 1) the development of short synthetic routes to (–)-picrotoxinin, (–)-picrotin, and 5-methyl-picrotoxinin enabled by a late-stage strong-bond activation strategy for the long term goal of interrogating GABA<sub>A</sub> receptor combinatorial diversity, 2) the development of three methods for alkene hydrofunctionalization using Mn- and Co- hydrogen atom transfer chemistry, and 3) two studies in catalysis centered on one-carbon metabolism which improve understanding of how one-carbon metabolites contribute to health and disease.

**Tuesday, February 22, 2022 | 10:30 AM | YH 2033 & Zoom**